

JAN MCLIN CLAYBERG
PATENT AND TECHNICAL TRANSLATION

JAN MCLIN CLAYBERG *
OLAF BEXHOEFT **

ACCREDITED BY AMERICAN TRANSLATORS ASSOCIATION
* GERMAN AND FRENCH TO ENGLISH
** ENGLISH TO GERMAN

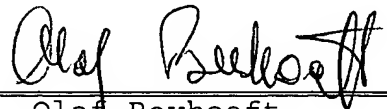
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February 1, 2005

DECLARATION

The undersigned, Olaf Bexhoeft, hereby states that he is well acquainted with both the English and German languages and that the attached is a true translation to the best of his knowledge and ability of the German text of PCT/DE2003/002526, filed on 07/26/2003, and published on 02/19/2004 under No. WO 2004/014770 A1, and of three (3) amended claims.

The undersigned further declares that the above statement is true; and further, that this statement was made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or document or any patent resulting therefrom.



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DT Rec'd PCT/PTO 02 FEB 2005

Translation of the pertinent portions of an International Preliminary Examination Report, mailed 09/14/2004

2. This report comprises a total of 11 pages. Attachments in the amount of 8 pages are also enclosed.

3. This report contains information regarding the following items:

- I Basis of the Report
- IV Lack of Unity of the Invention
- V Reasoned Determination under Rule 66.2a)ii)

INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

1. **Basis of the Report**

Specification, pages

- 1, 3 to 19 in the originally filed version
- 2, 2a received 08/20/2004 with letter of
08/19/2004

Claims, Nos.

- 22 (part), 23 to 30 in the originally filed version
- 6 (part), 7-15, 16 (part) in the version amended under
Article 19 (with an explanation,
if needed)
- 1-5, 6 (part), 16 (part)
- 17-21, 22 (part) received 08/20/2004 with letter
of 08/19/2004

Drawings, sheets

- 1/8 to 8/8 in the originally filed version

IV Lack of Unity of the Invention

2. The Office has determined that the requirement of unity of the invention has not been met

3. The Office is of the opinion that the requirement of unity of the invention has not been met

X for the following reasons:

see the attached page

4. An international preliminary examination of

X all parts

of the international application was performed.

V Reasoned Determination under Art. 35(2)

1. Determination

Novelty	Yes: Claims 1 to 30
	No: Claims

Inventive Activities	Yes: Claims 1 to 30
	No: Claims

Commercial Usefulness	Yes: Claims 1 to 30
	No: Claims

2. References and Explanations:

see the attached page

ATTACHED PAGE

Re.: Item IV

Reference is made to the following document:

D1: USP 6,018,687

1. The office charged with the international preliminary examination is of the opinion that three (3) inventions are being claimed in the present international application, which are included in the following groups of claims:

Group 1: Claims 1 to 7, 22 to 25, 26 (first invention)

A device for guiding a web of partial width in a processing machine having a registration device, wherein a registration device and a further guide element are fixedly connected with a common support in such a way that they can be moved together on a guide element transversely to a direction of an incoming web.

Group 2: Claims 8 to 10, 22 to 25, 26, 11 to 15, 19 to 21 to 25, 16, 19 to 24 (second invention)

A device or guide element for guiding a web of partial width in a processing machine, wherein the axis of rotation of the roller or the guide element is oriented substantially vertically to an alignment of the lateral frame of the processing machine.

Group 3: Claims 17 to 25 (third invention)

A guide element for guiding a web of partial width in a processing machine, wherein a roller body of the roller has individually rotatable section side-by-side in axial direction.

2. Reasons for the Lack of Unity

2.1 Document D1 discloses a device for guiding a web of partial width in a processing machine in accordance with the preamble of claim 1.

The device in accordance with the first invention corresponding to claim 1 of the international application differs from this device in that the registration device and

the further guide element are fixedly connected with a common support in such a way that they are movable together on a guide element transversely to the direction of an incoming web.

The objective problem that, inter alia, the structural space of the processing machine is reduced, is solved by this technical characteristic.

Therefore this characteristic is considered to be a "special technical characteristic" (Rule 13.2 PCT).

2.2 Document D1 discloses a device for guiding a web of partial width in a processing machine with a last, non-driven roller, which is arranged upstream of a former and is assigned only a web layer, as well as with a registration roller, wherein these have a width transversely to the running direction of the incoming web which is less than a maximum full web to be processed in the processing machine (see claim 8).

D1 furthermore discloses a guide element for guiding a web of partial width in a processing machine, wherein the guide element is only driven by friction with a cooperating web, and wherein the guide element has a width transversely to the running direction of the incoming web which is less than a maximum full web to be processed in the processing machine (see claim 11).

Moreover, D1 discloses a device for guiding a web of partial width in a processing machine, which is embodied as a roller which can be moved in respect to the lateral frame in such a way that a path length of the web can be changed by this, wherein a roller body of the roller has a width transversely to the running direction of the incoming web which is less than a maximum full web to be processed in the processing machine (see claim 16).

The subject in accordance with the second invention corresponding to claims 8, 11 and 16 differs from this device or this guide element in that the axis of rotation of the roller or of the guide element is aligned substantially vertically in respect to an alignment of the lateral frame of the processing machine.

The objective problem that short running paths of the partial webs are made possible is solved by this technical characteristic.

Therefore this characteristic of claims 8, 11 and 16 is considered to be a "special technical characteristic" (Rule 13.2 PCT).

2.3 Document D1 discloses a guide element for guiding a web of partial width in a processing machine, which is embodied as a non-driven roller, whose width transversely in respect to the incoming web is less than a maximum full web to be processed in the processing machine.

The guide element in accordance with the third invention in accordance with claim 17 of the international application differs from this guide element in that a roller body of the roller has individually rotatable section side-by-side in the axial direction.

The objective problem that a web transport at desired and preselectable speeds and web tensions is possible also for partial webs is solved by this technical characteristic.

Therefore this characteristic of claim 17 is considered to be a "special technical characteristic" (Rule 13.2 PCT).

2.4 It is not possible to detect a characteristic which could provide a technical connection between the three inventions. Neither the objective problems which lie at the bottom of the three claimed inventions, nor their solutions defined by the "special technical characteristic" (Rule 13.2 PCT) allow the establishment of a technical connection between the three inventions.

As a result, the three groups of claims are not connected by "identical or corresponding special technical characteristics", and therefore define three different inventions which are not connected by a "single common inventive idea".

Therefore the requirements in accordance with Rule 13.2 PCT have not been met. Accordingly, the international invention contains three inventions and therefore does not meet the requirements in accordance with Rule 13.1 PCT.

Re.: Item V

Reference is made to the following documents:

D2: GB 1 546 798
D3: GB 594 035

1. Document D2 is considered to be the closest prior art in connection with the subject of claim 1. It discloses (the references in parentheses relate to this document):

A device for guiding a web (40) of partial width in a processing machine, having two registration devices, by means of which the webs (40) of partial width can be brought into a longitudinal registration in relation to another web (40) of partial width, and having two further guide elements (50), which impart a directional change or an offset, wherein a first registration device and a first one of the further guide elements (50) are fixedly connected with a first common support (48, 58, 60) in a way that together they can be moved on a guide element transversely in respect to the direction of an incoming web (40) (see claim 1).

1.1 The subject of claim 1 therefore differs from the known device in that a second registration device and a second one of the further guide elements are fixedly connected with a second common support in a way that together they can be moved on a guide element transversely in respect to the direction of an incoming web (40).

Therefore the subject of claim 1 is novel (Article 33(2) PCT).

1.2 Therefore the object to be attained by means of the instant invention can be seen to rest in that an alternative arrangement of the registration devices and the guide elements is created for an independent registration of the partial webs.

The attainment of this object suggested in claim 1 of the instant application is neither known from the applicable prior art, nor is it suggested by it. Therefore the attainment is based on inventive activities (Art. 33(3) PCT).

1.3 Claims 2 to 7 and 22 to 25 depend from claim 1 and therefore also meet the requirements of PCT regarding novelty and inventive activities.

2. Document D1, which is considered to be the closest prior art, discloses a device for guiding a web of partial width in a processing machine with a non-driven roller (18), as well as with a registration roller (150), from which the subject of claim 8 differs in that the axes of rotation of the two rollers are aligned substantially vertically in respect to an alignment of the lateral frame of the processing machine.

Therefore the subject of claim 8 is novel (Article 33(2) PCT).

3. Document D1, which is considered to be the closest prior art, discloses a guide element (18, 150) for guiding a web of partial width in a processing machine, from which the subject of claim 11 differs in that the axis of rotation of the guide element is aligned substantially vertically in respect to an alignment of the lateral frame of the processing machine.

Therefore the subject of claim 11 is novel (Article 33(2) PCT).

4. Document D1, which is considered to be the closest prior art, discloses a guide element (150) for guiding a web of partial width in a processing machine, which is embodied as a movable roller, from which the subject of claim 16 differs in that the axis of rotation of the roller is aligned substantially vertically in respect to an alignment of the lateral frame of the processing machine.

Therefore the subject of claim 16 is novel (Article 33(2) PCT).

5. The object to be attained by means of the inventions of independent claims 8, 11 and 16 can therefore be seen to rest in making short running paths of the partial webs in the processing machine possible.

The attainment of this object proposed in claims 8, 11 and 16 of the instant application is neither known from the applicable prior art, nor is it suggested by it. Therefore the attainment is based on inventive activities (Art. 33(3) PCT).

5.1 Claims 9, 10, 13 to 15 and 19 to 21 depend from claims 8 or 11 and therefore also meet the requirements of PCT regarding novelty and inventive activities.

6. Document D3, which is considered to be the closest prior art, discloses a guide element (13) for guiding a web of partial width in a processing machine, which is embodied as a non-driven roller, wherein a roller body of the roller has individual rotatable sections side-by-side in the axial direction, from which the subject of claim 17 differs in that the roller is arranged in the superstructure of the processing machine embodied as a web-fed rotary printing press, and that the width of the sections transversely in respect to the running direction of the incoming web is

dimensioned in such a way that their projection substantially corresponds to the width of the incoming web of partial width.

Therefore the subject of claim 17 is novel (Article 33(2) PCT).

6.1 Therefor the object to be attained by means of the instant invention can be seen to rest in assuring a web transport in such a processing machine, which is safe in respect to the web tension.

6.2 The attainment of the object proposed in claim 17 of the instant application is neither known from the prior art, nor is it suggested by it. Therefore the attainment is based on inventive activities (Article 33(3) PCT).

6.3 Claims 18 to 21, 23 and 24 depend from claim 17 and therefore also meet the requirements of PCT regarding novelty and inventive activities.

7. The subject of independent claim 26 is a processing machine with at least one device for guiding a web of partial width in accordance with claim 1 or 8. Therefore claim 26 also meets the requirements of PCT regarding novelty and inventive activities.

7.1 Claims 27 to 30 depend from claim 26 and therefore also meet the requirements of PCT regarding novelty and inventive activities.

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A guide element, embodied as a registration roller, is disclosed in DE 36 02 894 C2, which is embodied so that its position can be changed and thereby changes the web path.

A frame in GB 1 546 798, having a plurality of turning bars and a plurality of registration rollers, can be moved as a whole laterally in respect to the incoming web. This entire frame can be replaced for taking various web divisions into account.

In GB 594 035 a deflection roller for already folded strands is disclosed downstream of the formers, which has several individually rotatable roller sections over the width of the strand.

The object of the invention is based on providing devices for guiding a web of partial width, a guide element for guiding a web of partial width, and a processing machine with these devices.

In accordance with the invention, this object is attained by means of the characteristics of claims 1, 8, 11, 16, 17 or 26.

The advantages which can be obtained by means of the invention lie in particular in that a web transport is also assured for partial webs by simple means at desired and preselectable speeds and web tensions. Inertia effects are reduced by the device, which would be caused in the course of conducting partial webs over non-driven guide elements extending over the entire possible web width, such as guide rollers. The above described effects on quality and safety are minimized.

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The arrangement of two guide elements on a common

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support makes possible, for one, the mutual movement of the two guide elements, without it being basically necessary in case of a production change to perform their realignment with each other. The arrangement of two guide elements at least on a common guide device saves structural space and makes short running paths of the partial webs possible.

With some exemplary embodiments it is furthermore possible to shorten the web path and to prevent a renewed tipping of the partial web in the course of a simple turning of the partial web.

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Claims

1. A device for guiding a web of partial width (17, 22, 23, 24) in a processing machine, having two registration devices (26, 51), by means of which webs of partial width (22, 23, 24) can be brought into a longitudinal registration in relation to another web of partial width (22, 23, 24), and having two further guide element (28, 30, 41), which impart a directional change or an offset in respect to the running direction, characterized in that a first one of the registration devices (26, 51) and a first one of the further guide elements (28, 30, 41, 41') are connected with a first common support (25, 27, 43, 43') in such a way, that they are together movable transversely in respect to a direction of an incoming web (17, 22, 23, 24), on a guide element (08, 42, 46, 54), and a second of the registration devices (26', 51') and a second of the further guide elements (28', 30' 41') are fixedly connected with a second common support (25', 27', 43') in such a way that they can be moved together on at least one further guide element (08, 42', 46', 54) transversely to a direction of an incoming web (17, 22, 23, 24).

2. The device in accordance with claim 1, characterized in that web (22, 23, 24) of partial width is embodied as a longitudinally cut partial web (22, 23, 24) of a full web (17) passing through the processing machine.

3. The device in accordance with claim 1,

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characterized in that the registration device (26, 51) and the further guide element (28, 30, 41, 41') are assigned to the same web (17, 22, 23, 24).

4. The device in accordance with claim 1, characterized in that the further guide element (28, 30) is embodied as a turning bar (28, 30).

5. The device in accordance with claim 1, characterized in that the further guide element (41, 41') is embodied as a last non-driven roller (41, 41'), arranged

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upstream of a former (11, 12) and only assigned to one web layer.

6. The device in accordance with claim 1, characterized in that the parts of the registration device (26) working together with the web (22, 23, 24) of partial width, as well as of the further guide element (28, 30, 41, 41'), are dimensioned in their width transversely to the

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running direction of the incoming web (22, 23, 24) of partial width in such a way that their projection is less than a maximum web (07) to be processed in the processing machine.

7. The device in accordance with claim 1, characterized in that the parts of the registration device (26) working together with the web (22, 23, 24) of partial width, as well as of the further guide element (28, 30, 41, 41'), are dimensioned in their width transversely to the running direction of the incoming web (22, 23, 24) of partial width in such a way that their projection substantially corresponds to the width (b23) of the incoming web (22, 23, 24) of partial width.

8. A device for guiding a web of partial width (17, 22, 23, 24) in a processing machine with at least one last non-driven roller (41, 41'), arranged upstream of a former (11, 12) and only assigned to one web layer, as well as a registration roller (32), the axes of rotation of both are substantially aligned vertically in respect to an alignment of a lateral frame of the processing machine, characterized in that they have a width transversely in respect to the running direction of the incoming web (22, 23, 24) which is less than a maximum full web (07) to be processed in the processing machine.

9. The device in accordance with claim 8, characterized in that all non-driven rollers (31, 32, 36, 41,

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48) assigned to a web (22, 23, 24) of partial width on its path between a longitudinal cutting device (06) and a former (11, 12) have a width transversely to the running direction of incoming web (22, 23, 24) which is less than a maximum full web (07) to be processed in the processing machine.

10. The device in accordance with claim 8 or 9, characterized in that the width substantially corresponds to the width (b23) of the incoming web (22, 23, 24) of partial width.

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11. A guide element for guiding a web (17, 22, 23, 24) of partial width in a processing machine, wherein the guide element (31, 32, 36, 41, 48) is driven only by friction with a cooperating web (22, 23, 24), and wherein its axis of rotation is substantially aligned vertically in respect to an alignment of the lateral frame, characterized in that the guide element (31, 32, 36, 41, 48) has a width transversely to the running direction of the incoming web (22, 23, 24) which is less than a maximum web (07) to be processed in the processing machine.

12. The guide element in accordance with claim 11, characterized in that the guide element (31, 32, 36, 41, 48) is arranged in the superstructure (04) between a longitudinal cutting device and a folding structure (02).

13. The guide element in accordance with claim 11, characterized in that the guide element (31, 32, 36, 41, 48) is embodied as a registration roller (32).

14. The guide element in accordance with claim 11, characterized in that guide element (31, 32, 36, 41, 48) is embodied as a deflection roller (31, 48).

15. The guide element in accordance with claim 11, characterized in that guide element (31, 32, 36, 41, 48) is embodied as a last non-driven roller (41, 41'), arranged

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upstream of a former (11, 12) and assigned to only one web layer.

16. A guide element for guiding a web (17, 22, 23, 24) of partial width in a processing machine, which is embodied as a roller (32) being movable in respect to a lateral frame in such a way that by means of this the path length of the web (22, 23, 24) can be changed, wherein the axis of rotation of the roller (32) extends substantially vertically in respect to an alignment of the lateral frame, characterized in that a roller body of the roller (32) has a width

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transversely to the running direction of the incoming web (22, 23, 24) which is less than a maximum full web (07) to be processed in the processing machine.

17. A guide element for guiding a web (17, 22, 23, 24) of partial width in a processing machine, which is embodied as a non-driven roller (31, 32, 36, 41, 48) in the superstructure (04) of a web-fed rotary printing press, characterized in that a roller body of the roller (31, 32, 36, 41, 48) has separately rotatable sections (37) side-by-side in the axial direction, whose width transversely to the running direction of the incoming web (22, 23, 24) is less than a maximum full web (07) to be processed in the processing machine, and is of such dimensions that their projection substantially corresponds to the width (b23) of the incoming web (22, 23, 24) of partial width.

18. The guide element in accordance with claim 17, characterized in that the roller (36, 41) is embodied as a last non-driven roller (36, 41), arranged upstream of a former (11, 12) and assigned to only one web layer.

19. The guide element in accordance with claim 11, 13 or 17, characterized in that the width and length (L37) of the sections (37) substantially correspond to the width (b23) of the possible incoming webs (22, 23, 24) of partial width.

20. The guide element in accordance with claim 11, 13

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or 17, characterized in that it is arranged on a guide element (08, 42, 46, 54) so that it is movable transversely in respect to the a direction of an incoming web (22, 23, 24).

21. The guide element in accordance with claim 11, 13 or 17, characterized in that it is arranged on a common guide element (08, 42, 46, 54) together with a registration device (26, 51).

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22. The device in accordance with claim 8, or the guide element in accordance with claim 21, characterized in that the registration device (26) and the guide element (28,

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